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Evaluation of a training programme for primary care providers to offer brief behaviour change counselling on risk factors for non-communicable diseases in South Africa

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ABSTRACT

Objective: To evaluate the effect on clinical practice of training primary care providers (PCPs) in an approach to brief behaviour change counselling (BBCC), integrating the 5As (ask, alert, assess, assist, arrange) with a guiding style derived from motivational interviewing in the South African context. BBCC was focused on the four risky behaviours (unhealthy eating, tobacco smoking, physical inactivity, harmful alcohol use) for non-communicable diseases.
Methods: It was a before-and-after design, recording BBCC skills at baseline, directly after training and 6-weeks later. We evaluated each recording for adherence to the guiding style and delivery of the 5As using the Motivational Interviewing Treatment Integrity 3.1.1. tool, and a tool based on the 5As training design.
Results: 123 recordings were collected from 41 PCPs. Results showed a significant improvement in adoption of the guiding style (e.g. global score at baseline 2.0 (2.0–2.6) and in clinical practice 3.0 (2.7–3.3) $p < 0.001$) and completion of the 5A steps (e.g. assist score at baseline 1.26 (1.12–1.4) and in clinical practice 1.75 (1.61–1.89) $p < 0.001$).
Conclusion: Training PCPs in this approach to BBCC is effective at changing their clinical practice in the short term.
Practice implications: The training programme should be integrated into the curricula of PCPs, and used in continuing professional development.

1. Introduction

Non-communicable diseases (NCDs) are the leading cause of mortality globally, contributing to 60% of all deaths, with nearly 80% occurring in the developing world [1]. Between 1990 and 2013, the numbers of deaths from NCDs and injuries steadily increased, while deaths from communicable, maternal, neonatal, and nutritional causes decreased [1]. Formerly thought of as diseases of affluence, it is expected that the largest increase in NCD deaths will occur in low and middle income African countries, where they will contribute to 70% of deaths by 2020, and be the most common cause of death by 2030 [2]. South Africa is faced with a transition in the burden of disease as the dominance of chronic infectious diseases, such as HIV/AIDS and tuberculosis, is rivalled by the growing prevalence of NCDs, such as hypertension and type 2 diabetes [3,4]. The scaling up of the HIV treatment programme has also resulted in longer life expectancy, which increases the number of people at risk of developing NCDs. This has led to an increased prevalence of NCDs in all communities, disproportionately affecting poor people living in urban settings, and placing an increasing demand on chronic care delivery [5]. The risk factors associated with NCDs have been clearly identified and confirmed locally [6,7]. Tobacco smoking, excessive alcohol consumption, lack of physical activity and unhealthy diet are the key modifiable factors contributing to morbidity and mortality from NCDs [8,9].

Health services in low and middle income countries, such as South Africa, are based on a model of treating acute illness, and are not organised for the prevention and on-going management of NCDs. The need for integrating the care of chronic diseases into primary care, has recently been recognised by the National Department of Health in their strategic plan for NCDs [10]. Ambulatory primary care is dominated by patients presenting with NCDs,

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and multi morbidity is common [11]. Although behavioural interventions that target multiple risk factors have been demonstrated to improve risk factors for diabetes and hypertension they are not given priority in the existing health system [12]. Shifting the focus of primary care systems from an acute to chronic care model is a complex task, and all levels of the system need to work together to successfully implement, support and coordinate chronic care [3,13].

The internationally recognised chronic care model acknowledges the need for change, not only at the system level, but also at the level of the consultation [14]. It is recommended that primary care providers shift away from the traditional, directive approach to counselling patients with risky lifestyle behaviours and adopt a more patient-centred style. A directive style assumes that it is the provider's responsibility to convince the patient on what, and how to change [12]. This approach often results in resistance from the patient and frustration from the provider as patients do not change when they expect them to [15]. In current best practice recommendations, however, the patient is regarded as the expert in deciding if and why they should change their lifestyle, and the PCP acts as an expert guide, working collaboratively with the patient to support self-management [13].

Self-management support involves assisting the patient by guiding them in problem solving, decision-making, resource utilisation, forming a patient-health care provider partnership and taking action [13]. Several approaches can be used to support the patients' self-management [13]. For example, in our local context, a group self-management programme for people with diabetes delivered by health promoters, reported behaviour change and was shown to be cost-effective [15–17]. However, brief behaviour change counselling (BBCC), delivered by PCP's to individual patients, as part of the normal consultation is also an effective way of assisting patients [15,18]. Individual BBCC should be actively integrated into everyday primary care and, therefore, training is required to enhance practitioners' perceptions of the value of changing their consultation style, their ability to succeed, and to provide them with the necessary skills [6,8,19].

South Africa's primary care services are primarily nurse led, and appropriately trained nurses with doctors playing a supportive and reinforcing role, can deliver high quality preventative care [20]. Currently the local training of PCPs on BBCC is not designed to achieve competency, and PCPs lack confidence in their ability to perform BBCC [15]. Apart from insufficient training, PCPs are also faced with numerous other barriers, including language barriers, lack of time, poor content knowledge of lifestyle modification, poor continuity of care, and their expectations of patient non-adherence [12,15]. Redesigning the current training programme was therefore deemed necessary in order to improve BBCC as a component of chronic care [15].

The ADDIE process provided a systematic approach for the Analysis of learning needs, the Design and Development of the training programme, its Implementation and initial Evaluation [21]. The overall aim was to ensure that PCPs were trained to use a best practice BBCC method for patients with risky lifestyle behaviours that included screening for risky behaviour, providing evidence-based accurate information, assessing readiness to change, and offering effective guidance or referral. A detailed description of the situational analysis, and the development and implementation of the training programme is given elsewhere [15,21]. This study reports on the initial evaluation of the effectiveness of the training intervention.

There are a number of approaches that can be used to assist patients in changing risky behaviours, such as motivational interviewing, health coaching and the 5As (Ask, Alert, Assess, Assist and Arrange). No single approach is superior to the other, in fact they often complement each other and most BBCC training programmes are designed by using a combination of approaches [13]. Very few of these training programmes assess the effectiveness of the training, by measuring primary care providers performance before and after the training programme [22–24]. A possible reason for this could be that each programme is unique in terms of content, duration, target audience and setting, and therefore no standardised tool to assess the effectiveness of all BBCC programmes currently exists. To our knowledge, this was the first time that a training intervention for BBCC, based on models found to be successful in high-income countries, was developed for our setting, and tested in an African context. The specific objectives of this study were to:

- Evaluate the ability of PCPs to demonstrate BBCC at the end of the training course.
- Evaluate the ability of PCPs to incorporate BBCC into actual clinical practice.

2. Methods

2.1. Study design

The study was a before-and-after study design with evaluation of BBCC skills at baseline, directly after training and six weeks later when participants had returned to their clinical practice.

Participants consulted a standardised patient who presented with one of the four risky lifestyle behaviours, immediately before, and immediately after the training intervention. Six weeks later, participants were again consulted and recorded by a standardised patient at the clinic where they worked, however the trained participants were blinded as to the identity of the patient within their normal clinical workload.

2.2. Study participants and setting

The study was conducted within the context of the primary care system in the Western Cape, where the majority of patients are seen in the public sector by clinical nurse practitioners in either small clinics or larger health centres. The public sector primary care system is struggling to develop a culture of patient-centeredness and to provide some form of continuity of care. Patients in the public sector are uninsured and come from low educational and socio-economic backgrounds, while patients in the private sector are usually employed and insured, or can afford out-of-pocket payments. In the private sector care is usually provided by a general practitioner [25].

Our study participants included primary care doctors and clinical nurse practitioners. The primary care doctors included medical officers working in the public sector, general practitioners working in the private sector, or family physicians. Family physicians have 4-years of postgraduate training, while working as a registrar in the public sector and registered with either Stellenbosch University or the University of Cape Town. The clinical nurse practitioners were receiving training through the 1-year Diploma course (Diploma in Clinical Nursing Science, Health Assessment, Treatment and Care) at Stellenbosch University.

2.3. Sample size calculation and sampling strategy

A sample size of 40 individuals was calculated to have 86% power to detect a change of 0.1 on the global rating, assuming a standard deviation of 0.2. A sample size of 20 nurses and 20 doctors was therefore recommended, but to compensate for attrition we aimed to include 25 from each group.

Participants were recruited by advertising it as a short course to family medicine and nurse training programme managers, family